c) REMARKS

The claims are 1, 3-6, 9-13 and 27, with claims 1 and 11-13 being independent. Claims 1 and 11-13 have been amended to better define the intended invention. Reconsideration of the claims is expressly requested.

Claims 1 and 11-13 have been amended to clarify a voltage lower than the plasma potential is applied to the auxiliary electrode to avoid discharge and not effect the existing plasma. Support for this amendment is found, inter alia, on page 11, lines 18-20, page 11, line 22 to page 12, line 18 and in the Examples. Claim 11 is specifically supported on page 12, lines 11-18.

Claims 1, 3-6, 11-13 and 27 were rejected under 35 U.S.C. 103(a) as being unpatentable over Burger et al., WO 98/58100 (or its counterpart, U.S. 6,372,303) (Burger '303). Claim 6 was rejected as obvious over Burger in view of Tamura, JP '127. Claims 9 and 10 were rejected under 35 U.S.C. 103(a) as being unpatentable over Burger in view of Raoux et al., U.S. 6,162,709 (Raoux '709). Applicants respectfully traverse these rejections.

The Examiner admits that Burger does not teach the maximum amplitude of the bias voltage. The Examiner, however, argues that a cause and effect relationship exists between the magnitude of the voltage and the hardness of the deposited layer and further alleges that it would have been obvious to one of ordinary skill in the art to use voltages that gave the desired hardness of the deposited layer. Burger does not teach or suggest that a maximum amplitude of the bias voltage exceeding 80 V may cause discharge (see page 11, lines 22-25, in the specification). The claims have now been amended to clarify that feature. In addition, Applicants have demonstrated that it is possible to control the quantity

of hydrogen radical without changing the quantity of SiH radical by using the deposited-film formation method of Example 2 when the voltage amplitude is set to 80 V or less (see Figure 1; see also page 22, lines 11-24 of the specification).

Burger is also said to teach a substrate holder, which can act as an auxiliary electrode by producing a substrate bias, and which is supplied with a frequency that allegedly overlaps Applicants' claimed range. However, the present claims preclude an auxiliary electrode which is the substrate. Further, Burger's frequency range is from 0.1 KHz to 10 MHz, preferably 1-100 KHz. Accordingly, Burger tends to teach away from the present claimed range. The lower limit for the frequency of the voltage applied to the instant auxiliary electrode is at least 1 MHz to prevent inducing unnecessary movement of ions (see page 15, lines 24-25, in the specification). To the contrary Burger prefers a frequency of 1-100 KHz, which is less by a factor of 1000 than Applicants' lower limit.

Accordingly, Applicants submit that none of the references, whether considered alone or combined, discloses or suggests the present claimed invention nor renders it unpatentable. It is respectfully requested that the claims be allowed and that the case be passed to issue.

Applicants' undersigned attorney may be reached in our New York office by telephone at (212) 218-2100. All correspondence should continue to be directed to our below listed address.

Respectfully submitted,

Attorney for Applicants

Registration No. 24947

FITZPATRICK, CELLA, HARPER & SCINTO
30 Rockefeller Plaza
New York, New York 10112-3801
Facsimile: (212) 218-2200

NY_MAIN 425533v1